

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: NOBUHIKO ODA, ET AL.

FOR: BOTTOM GATE-TYPE THIN-FILM TRANSISTOR AND METHOD FOR
MANUFACTURING THE SAME

PRELIMINARY AMENDMENT

Box Patent Application
The Assistant Commissioner of
Patents and Trademarks
Washington, DC 02031

Sir:

Prior to the Examiner acting in the above-referenced application, please preliminary
amend the abstract as follows:

IN THE ABSTRACT:

Please amend the abstract as follows:

ABSTRACT OF DISCLOSURE

In a bottom gate-type thin-film transistor manufacturing method, after ion doping, an ion stopper is removed. The ion stopper does not remain in the interlayer insulating film lying immediately above the gate electrode. The thin-film transistor has such a structure that no ion stopper, and the interlayer insulating layer is in direct contact with at least the channel region of the semiconductor layer. The impurity concentration in the vicinity of the interface between the interlayer insulating film and the semiconductor layer 4 is 10^{18} atoms/cc or less. This structure can prevent the back channel phenomenon and reduce variations in characteristic resulting from variations in manufacturing.

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Jennifer Matsun
(Typed or printed name of person mailing paper or fee)

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REMARKS

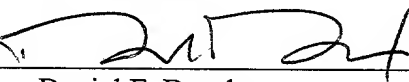
Applicants request entry of the above-identified amendments which conform the claims to U.S. practice. No new matter is being introduced by this Amendment as antecedent support is set forth in the specification and the original claims.

Prosecution on the merits is respectfully requested.

If there are any charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Applicants' attorneys.

Respectfully submitted,
NOBUHIKO ODA, ET AL.

CANTOR COLBURN LLP
Applicants' Attorney

By: 
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

ABSTRACT OF DISCLOSURE

In a bottom gate-type thin-film transistor manufacturing method, after ion doping, an ion stopper [(55)] is removed. The ion stopper [(55)] does not remain in the interlayer insulating film [(8)] lying immediately above the gate electrode. The thin-film transistor has such a structure that no ion stopper [(55)], and the interlayer insulating layer is in direct contact with at least the channel region of the semiconductor layer [(4)]. The impurity concentration in the vicinity of the interface between the interlayer insulating film and the semiconductor layer 4 is 10^{18} atoms/cc or less. This structure can prevent the back channel phenomenon and reduce variations in characteristic resulting from variations in manufacturing.